



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,438	08/23/2006	Tsuneo Nakata	P/2054-140	8750
2352	7590	06/16/2010	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			NGUYEN, DUC M	
ART UNIT	PAPER NUMBER			
		2618		
MAIL DATE	DELIVERY MODE			
06/16/2010	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,438	Applicant(s) NAKATA ET AL.
	Examiner DUC M. NGUYEN	Art Unit 2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 April 2010.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 23-38 is/are rejected.
- 7) Claim(s) 39 and 40 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

This action is in response to applicant's response filed on 4/12/10. Claims 23-40 are now pending in the present application. **This action is made final.**

Response to Arguments

1. Applicant's arguments with respect to claims 23-40 have been considered and **accepted/approved** according to the statement "Therefore, it is not necessarily the stronger signal at one particular antenna that determines which base station is selected, but rather it is the difference in the sensing of the same signal between the two antennas that determines which particular base station will be selected."

Here, the above statement clearly define the difference D1 between antennas A1, A2 of the signal received from base station B1 and the difference D2 between antennas A1, A2 of the signal received from base station B2 as an example. And for the handover process, the selection of base stations B1 or B2 would be based on the strongest value from D1 and D2.

However, an amended specification and a new drawing showing a flow chart that would outline/detail all of the above procedures (i.e, step by step) would be required in order to overcome the 112 rejection below. This requirement must be met in order to conform to the requirement "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such **full, clear, concise, and exact terms** as to enable any person skilled in the art to which it pertains,

or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."

In addition, the limitation "a hand-over process based upon difference of said transmission/reception state of **each of** said antennas" as recited in claims 23, 28, 33, 38 should be changed to "a hand-over process based upon differences of said transmission/reception state of said antennas". This would clear up the **confusion** caused by "**each of**" terminology that the limitation "a hand-over process based upon difference of said transmission/reception state of **each of** said antennas" would imply, for example, the difference of B1 and B2 signals received at antenna A1 or the difference of B1 and B2 signals received at antenna A2.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a hand-over process based upon difference of said transmission/reception state of each of said antennas" as recited in claims 23, 28, 33 must be shown ((i.e, details of a hand-off procedure) or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

A simple drawing is **proposed** below according to the statement "it is the difference in the sensing of the same signal between the two antennas that determines which particular base station will be selected,

! START !

!
v

Compute differences among antennas with respect
to the signal received from base station B1.
 $D_1 = \max$ of differences.

!
v

Repeat the above process
for each base station B_i , where $i > 1$.

!
v

Perform hand-over process to select
base station B_i with the strongest D_i .

Also note that an amended specification that describes the proposed drawing should also be included in the amendment.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such **full, clear, concise, and exact terms** as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims **23-38** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 23, 28, 33, 38, the claims recite a limitation of "detecting a transmission/reception condition of each antenna, and performing a hand-over process based upon **difference** of said transmission/reception condition of each of said antennas". However, this limitation contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Here, although a hand-over process is well known in the art for generally handing-off the communication to a base station providing a strongest signal quality, there are several implementations, however, for hand-off methods that would aim to prevent ping-pong hand-offs from one base station to another. For a communication device that comprises a plurality of

antennas, the situation would become more complicate. For examples,

Fig. 4 shows two antennas (101-1, 101-2) and three base stations (102-1, 102-2, 102-3), then "means for detecting a transmission/reception state of each antenna" would comprise

X11 : signal measurement between antenna 101-1 and base station 102-1,
X12 : signal measurement between antenna 101-1 and base station 102-2,
X13 : signal measurement between antenna 101-1 and base station 102-3,
X21 : signal measurement between antenna 101-2 and base station 102-1,
X22 : signal measurement between antenna 101-2 and base station 102-2,
X23 : signal measurement between antenna 101-2 and base station 102-3,
and "performing a hand-over process based upon difference of said transmission/reception state of each of said antennas" would comprise several differences ($X_{ik} - X_{jl}$), where $i=1, 2; j=1, 2; k=1,2, 3; \text{ and } l=1,2,3$; this would lead to the question of which **difference** would be used for performing a hand-over process based upon **difference** of said transmission/reception state of each of said antennas ? and subsequently, how would the hand-off process be done specifically ? Accordingly, an amended specification and a new drawing showing a flow chart that would outline/detail all of the above procedures (i.e, step by step) would be required in order to overcome the 112 rejection.

Here, in order to speed-up the prosecution of the application, the hand-off process based upon **difference** of said transmission/reception

Art Unit: 2618

condition of each of said antennas" would be interpreted as a process for handing-off the communication to a base station that provides the strongest of difference signals between antennas.

For instant, in the above example, the base station providing the largest or strongest difference signal among antennas would be the handed-off base station.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 39-40 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 39-40 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 4/12/10. In that paper, applicant has stated "it is not necessarily the stronger signal at one particular antenna that determines which base station is selected, but rather it is the difference in the sensing of the same signal between the two antennas that determines which particular base station will be selected", and this statement indicates that the invention is different from what is defined in the claim(s) because the claims recite "performing a hand-over process to the base station of the antenna where the radio wave intensity becomes strong with movement".

Suggestion: "performing a hand-over process to the base station of the antenna where the radio wave intensity becomes strong with movement" should be changed to

"performing a hand-over process to the base station of the antenna where the difference of radio wave intensity becomes strong with movement"

Allowable Subject Matter

7. Claims 23-38 would be allowable if the specification and claims rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action.
8. Claims 39-40 would be allowable if the claims rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any response to this final action should be mailed to:

Box A.F.
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Nay Maung (Supervisor) whose telephone number is (571) 272-7882.

/Duc M. Nguyen/

Primary Examiner, Art Unit 2618

June 12, 2010